Quantum

User's Guide User's Guide **User's Guide** User's Guide User's Guide

Quantum DPM5500

DPM5500

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Chapter 1

DPM5500 System Description

This chapter describes the DPM5500 system and its components. The chapter consists of:

- Overview
- Features and Benefits
- DPM5500 System
- Hard Drive Storage
- Supported RAID Configurations
- Turning on the System
- DPM5500 Operations
- Relocating the DPM5500 System
- Migrating Data Off the DPM5500
- Contacts

Overview

Quantum is a leader in disk-based backup and is committed to the ongoing development of tiered storage solutions for data protection. This tiered approach consists of disk- and tape based systems that optimize

the performance, reliability, availability, and return-on-investment of the backup, recovery and archive process, based upon the business value of customers' data over time. As the next major progression in delivering on its tiered data protection strategy, Quantum's DPM5500 is an integrated disk solution based upon Microsoft® System Center Data Protection Manager 2006 (DPM). This new solution will provide Quantum's Windows Server™ customers a more granular choice in data protection options.

A New Approach to Data Protection

Quantum's DPM5500 combines carefully selected components to deliver a fully integrated, high performance appliance ideal for disk-based backup in Windows environments. This appliance gives the system administrator an easy and efficient way to ensure that data in his environment is protected against any number of potential threats. Most importantly, the administrator can choose to apply this technology at multiple points throughout the day. Contrast this with normal client/server backup methodology. Rather than a nightly backup, backup data is captured as many as 68 times in a single day. This gives the administrator tremendous flexibility in providing outstanding service to internal customers. Rather than having to lose all work completed on a file between the time of data loss and the last nightly backup, the restoration of data can be performed from the last DPM backup captured which may never be more than fifty-nine minutes before the data loss occurred.

Optimized Performance for Windows Environments

Choosing system components, especially in networking environments, can be extremely difficult, time consuming and costly, especially when it isn't done right the first time. Quantum has done the hard work for you by carefully designing the DPM5500 to closely match the capabilities of Microsoft Data Protection Manager. By choosing the appropriately configured server, the right disk array can deliver the performance and quality that backup, recovery and archive environments demand, Quantum's DPM5500 stands above the rest in terms of ease of use, performance, integration of differentiated features and an impressive reputation for certified service and support.

The DPM5500 is available in both 4.8TB and 9.6TB configurations and enough performance muscle to backup 8TB's of Windows application data every hour.

Superior Service and Support

The DPM5500 Series comes with a one-year next business day standard warranty and StorageCare™ Guardian, Quantum's new proactive remote monitoring solution. The warranty can be extended for long-term protection and peace of mind at an affordable price. Additional 5x9x4 and 7x24x4 service contract upgrade response levels are also available. Professional Installation and Integration services can be purchased through Quantum to ensure maximum uptime. Please contact Quantum for availability in your region. Leveraging the intelligence inside the DPM5500 Series, StorageCare Guardian proactively monitors the health of the library over the Internet and uses intelligent diagnostics data to remotely service the equipment when something is wrong. Guardian is easy to install and can be downloaded online. Please visit http://guardianinfo.quantum.com for more information or contact Quantum Support to download Guardian today.

Features and Benefits

- High performance disk-based system
- Microsoft Data Protection Manager 2006
- Microsoft Storage Server 2003
- Performance tuned media server
- StorageCare Guardian remote diagnostic service (future enhancement)
- Protect 1 to 8 TB of Windows application files
- Enterprise class reliability and availability
- Hot-swappable drives and redundant power and cooling allow maximum uptime to your operations
- Tape copy software supports disaster recovery best practices (available 2006)

DPM5500 System

The system takes advantage of high speed hard drives to greatly reduce the time required for backup/restore functions and also improve confidence in completing the backup in the time allowed.

Table 1 DPM5500 Capacity Specifications

DPM Model (with Drive Size)	Raw Capacity
DPM5500 (400 GB drives)	4.8 TB to 9.6 TB

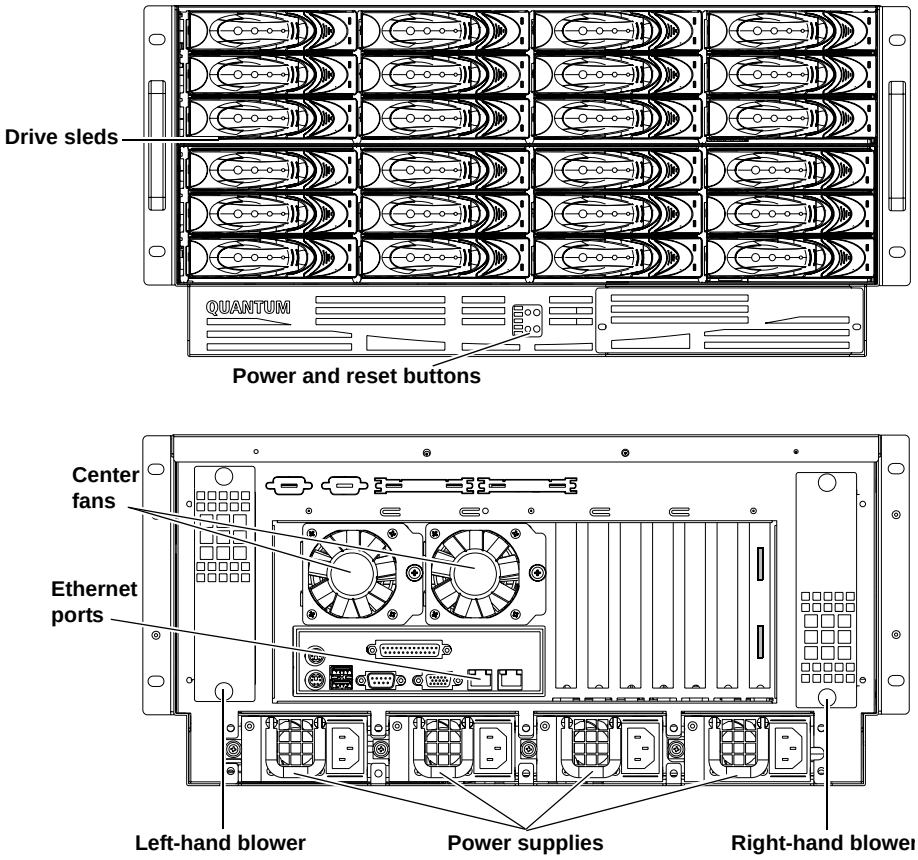
DPM5500 System

The DPM5500 system houses the following components:

- Drive sleds (twelve, eighteen, or twenty four drive sleds per storage array) (*customer serviceable*)
- Four redundant power supplies (*customer serviceable*)
- Redundant fan modules located at the back of the unit (*customer serviceable*)
- Motherboard, CPU, and memory (*not customer serviceable*)
- RAID controllers (*not customer serviceable*)

The *customer serviceable* components are removed and replaced either through the front/back of the system (see figure 1).

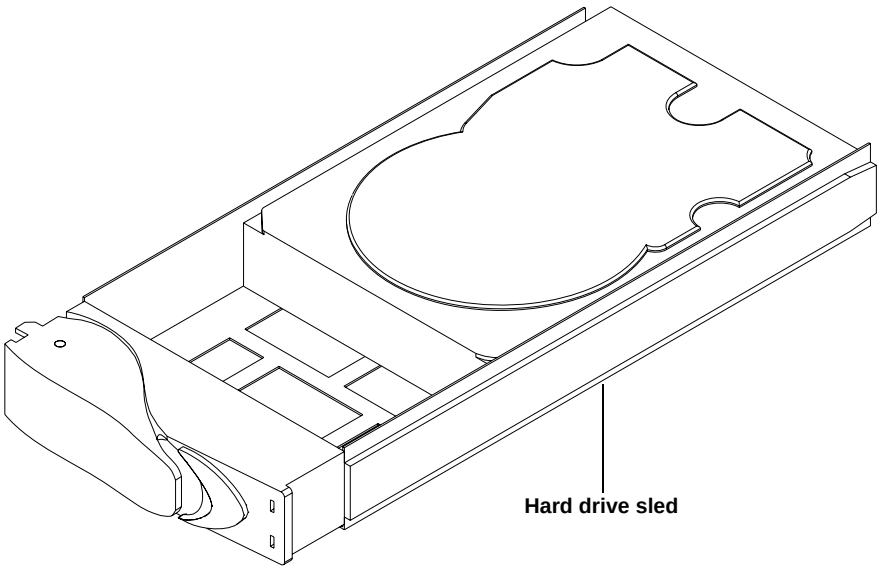
Figure 1 DPM5500 System Components



Hard Drive Storage

Serial ATA II hard drives (see figure 2) are the heart of both the DPM5500 systems. The storage space on these hard drives (1 drive per drive sled = 24 total drives for DPM5500) appear to the DPM application as storage space.

Figure 2 DPM5500 Hard Drives



Caution: Removing hard drives during system operation may cause loss of data or degraded system performance. Contact Quantum customer support to report any hard drive failure.

RAID Sets

The DPM5500 system is divided into RAID sets. The DPM5500 system can contain up to four RAID sets (two per array controller):

Array Controller 1 (drive sleds 0 through 11)

- The first RAID set is made up of the first six drive sleds (drive sleds 0-4 including the parity drive with drive 5 as a hot spare).
- The second RAID set is made up of the next six drive sleds (drive sleds 6-11 including the parity drive).

Array Controller 2 (drive sleds 0 through 11)

- The third RAID set is made up of the next six drive sleds (drive sleds 0-4 including the parity drive with drive 5 as a hot spare).
- The fourth RAID set is made up of the next six drive sleds (drive sleds 6-11 including the parity drive).

Each RAID set can sustain a single hard drive failure.

Supported RAID Configurations

RAID is short for Redundant Array of Independent (or Inexpensive) Disks, which is a category of hard disk drives that employ two or more drives in combination for fault tolerance and performance. There are a number of RAID levels in use today such as 0, 1, 3, 5, and 10.

The DPM5500 system support RAID 5 with hot spare configurations.

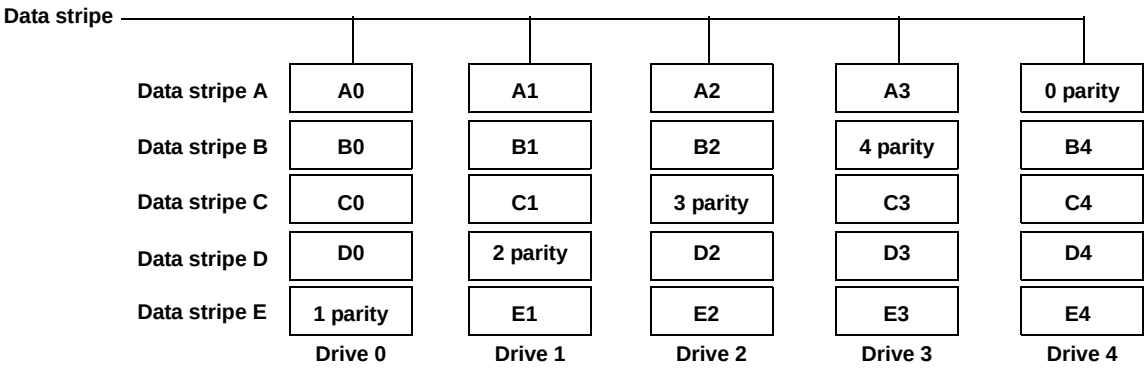
RAID 5 Configuration

The RAID 5 configuration is the most common RAID level in use today. RAID 5 minimizes the write bottlenecks of other RAID levels by distributing parity stripes over a series of hard drives. In doing so it provides relief to the concentration of write activity on a single drive, which in turn enhances overall system performance. Instead of allowing any one drive in the array to assume the risk of a bottleneck, all of the drives in the array assume write activity responsibilities. The distribution

frees up the concentration on a single drive, improving overall subsystem throughput.

The RAID 5 parity encoding scheme maintains the system's ability to recover any lost data should a single drive fail. This can happen as long as no parity stripe on an individual drive stores the information of a data stripe on the same drive. In other words, the parity information for any data stripe must always be located on a drive other than the one on which the data resides (see figure 8).

Figure 3 RAID 5 Configuration

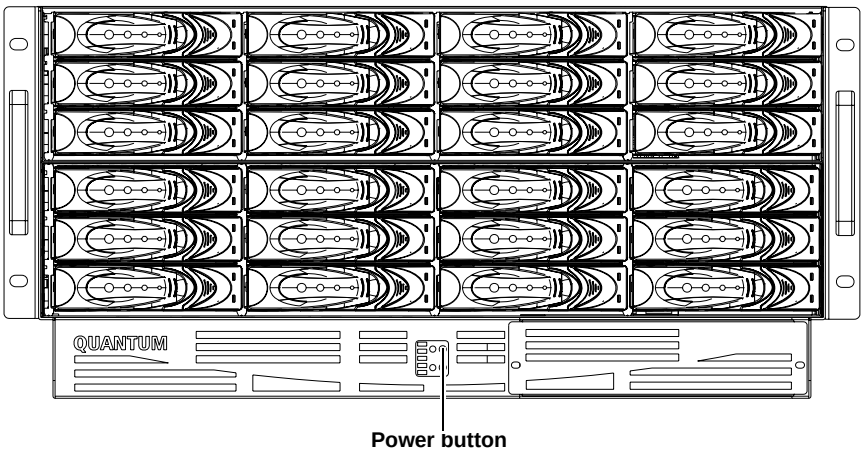


Turning on the System

To turn on the DPM5500 system (see figure 4):

1 Push the power button located on the front of the DPM5500.

Figure 4 Turning on the DPM5500



DPM5500 Operations

The DPM5500 has a series of LED indicators located on the front and back of the system. Refer to the following sections for LED locations and descriptions:

- Chassis LEDs and Buttons
- Hard Drive Sled LEDs
- Ethernet Port LEDs

Chassis LEDs and Buttons

The front of the DPM5500 chassis has a series of LED indicators and buttons. Refer to figure 5 and table 2

Figure 5 DPM5500 LED Indicators

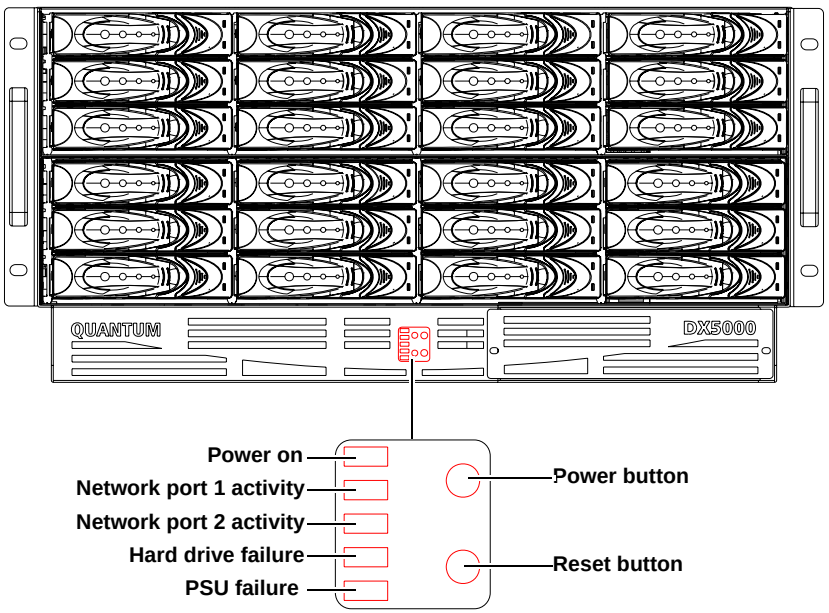


Table 2 DPM5500 LEDs

Button/LED	Description
Power button	Powers the DPM5500 system on or off.
Reset button	Resets the DPM5500 system.
Network port 1/2 activity	This LED flashes indicating activity on the network ports.
Hard drive failure	This LED flashes with an audible alarm when a hard drive has failed. Look at the front of the unit to identify the failed hard drive with an red LED indicator.
Power supply failure	This LED flashes with an audible alarm when a power supply has failed. Look at the back of the unit to identify the failed power supply with an amber LED indicator.
Power on	This LED is lit when the DPM5500 power is on.

Hard Drive Sled LEDs

The individual hard drive sleds contain LEDs that indicate the health condition of the hard drive. Refer to figure 6 and table 3.

Figure 6 Hard Drive Sled LEDs

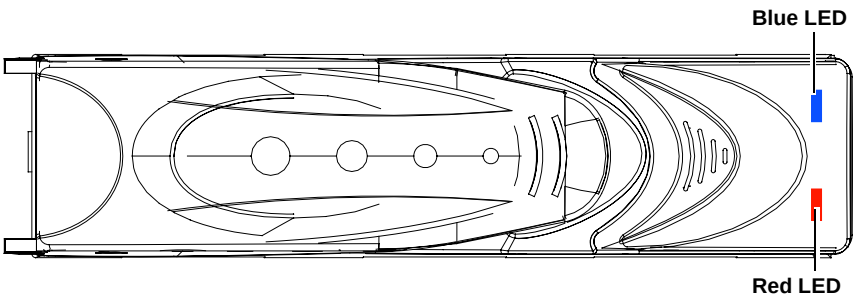


Table 3 Drive Sled LEDs

LED	Description
LEDs off	No power.
Blue LED solid	The hard drive is powered on and available for storage.
Blue LED blinking	The hard drive is active and receiving data.
Red LED solid	The hard drive sled has failed. Replace the hard drive sled (see the *Quantum DX3000/ DX5000/DPM5500 Hard Drive Replacement Instructions* (PN 81-81506) included on the documentation CD.

Ethernet Port LEDs

On the back of the DPM5500 chassis, the Ethernet ports contain LEDs that indicate the status of the Ethernet port. Refer to figure 7 and table 4.

Figure 7 Ethernet Port LEDs

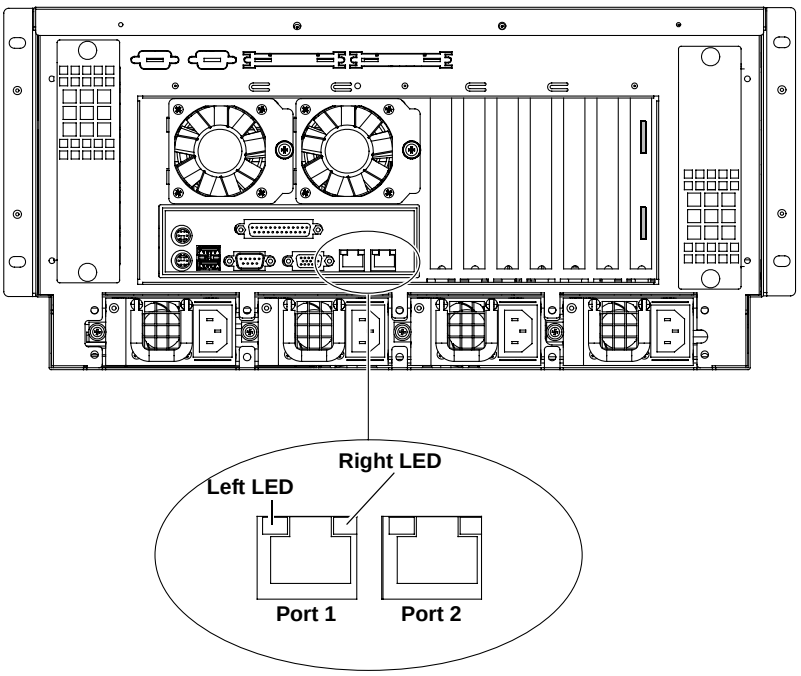


Table 4 Ethernet Port LEDs

LED	Description
Left LED amber blinking	Activity on the Ethernet port.
Right LED green	Ethernet communication on the port at 10/100 MHz.
Right LED amber	Ethernet communication on the port at 1GHz.
Left and Right LEDs off	No activity on the Ethernet port.

Power Supply LED

On the back of the DPM5500 chassis, each power supply contains an LED that indicates the health status of the power supply. Refer to figure 8 and table 5.

Figure 8 Power Supply LED Indicators

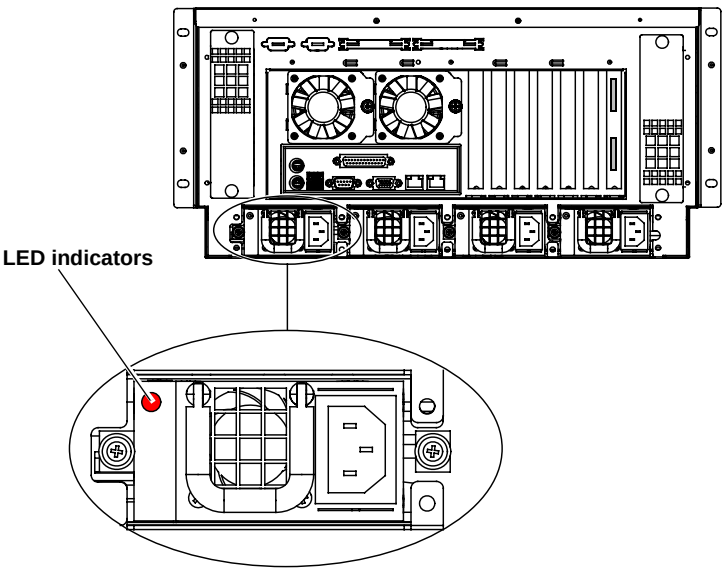


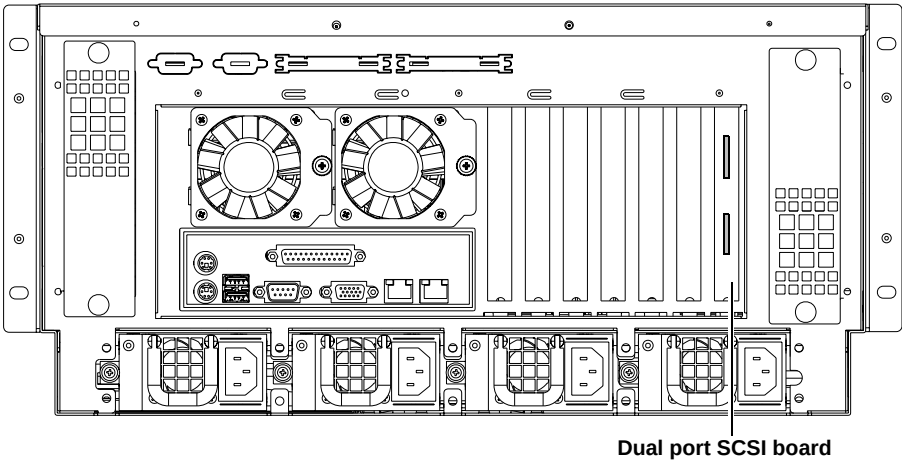
Table 5 Power Supply LED

LED	Description
LED is green	Power supply is operating normally.
LED is red.	The power supply has failed. Refer to the *Quantum DX3000/DX5000/DPM5500 Power Supply Replacement Instructions* (PN 81-81504) for more information.

Migrating Data Off the DPM5500

The DPM5500 contains a dual port SCSI board (see figure 9) to allow you to backup data stored on the DPM5500.

Figure 9 DPM5500 Dual Port SCSI Board



Refer to the following link for more information on backing up the DPM5500 with Microsoft DPM and Windows NT™ backup:

http://www.microsoft.com/windowsserversystem/dpm/default.mspx

Backing Up the Microsoft DPM Database Files

The Microsoft DPM database files are used to store the information responsible for maintaining the data stored on the hard drives. Quantum strongly recommends that your backup these database files located on the DPM5500 at:

C:\Program Files\Microsoft Data Protection Manager\DPM\DPMDB

These database files should be stored on another storage device such as a tape library. These files can be restored to the DPM5500 in case of a disaster when both operating system drives are corrupted.

Relocating the DPM5500 System

If you ever need to install the DPM5500 system to a different location, refer to the "*Quantum DPM5500 Quick Start Guide*" PN 81-81514 included on the documentation CD. These instructions include hardware installation and cabling as well as initial software configuration.

Contacts

The Quantum Customer Support Department provides a 24-hour help desk that can be reached at:

North/South America:	(949) 725-2100 or (800) 284-5101
Asia/Pacific Rim:	(International Code) +61 7 3862 4834
Europe/Middle East/Africa:	(International Code) +44 (0) 1256 848748

Send faxes for the Customer Support Department to:

North/South America:	(949) 725-2176
Asia/Pacific Rim:	(International Code) +61 7 3862 4677
Europe/Middle East/Africa:	(International Code) +44 (0) 1256 848777

To contact the Customer Support Department use the following web/ E-mail addresses:

North/South America:	www.quantum.com/askaquestion
Asia/Pacific Rim:	apachelp@quantum.com
Europe/Middle East/Africa:	eurohelp@quantum.co

Chapter 2

DPM5500 Remote User Interface

The DPM5500 systems utilizes a web-based interface which allows you to configure and manage the system from a remote workstation on the same network. The DPM5500 system is managed through the following web pages (accessible using Internet browser software installed on the host computer):

- System Status
- System Configuration
- Network Configuration
- Users
- Maintenance

DPM5500 Web Pages

The Internet browser software is not supplied with the DPM5500; you must obtain and install it independently. The DPM5500 systems support the following Internet browsers:

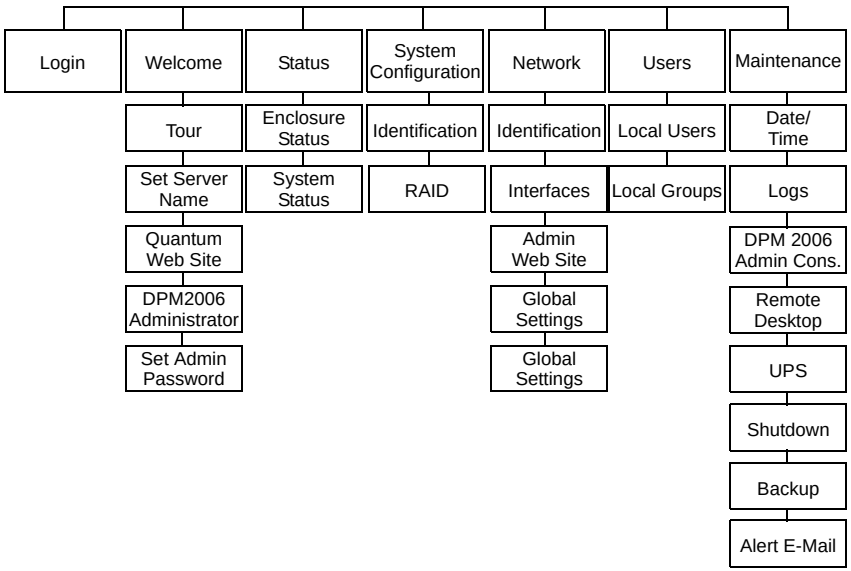
- Microsoft Internet Explorer 6.0 SP1 or later
  You can download this software from
  http://www.microsoft.com.

- Mozilla Suite 1.7 on Solaris 10
  You can download this software from
  http://www.mozilla.org.
- Firefox 1.0.6 on Windows
  You can download this software from
  http://www.mozilla.org.
- Java Plug-in 1.4.2 or later
  You can download this software from
  http://www.java.com

DPM5500 Web Page Menu Items

The following figure depicts the menu items available from the DPM5500 Web pages.

Figure 10 DPM5500 Web Page Menu Items



Accessing DPM5500 Web Pages

To access the DPM5500 web pages:

1 On the host computer, open the Internet browser software.

2 In the **Address** field, type http://IPaddress/ where IP address is the IP address for the system.

> **Note:** This IP address uses https, not the common http and there is also a special port (8098) that must be used. This address must be used every time the web pages are accessed.

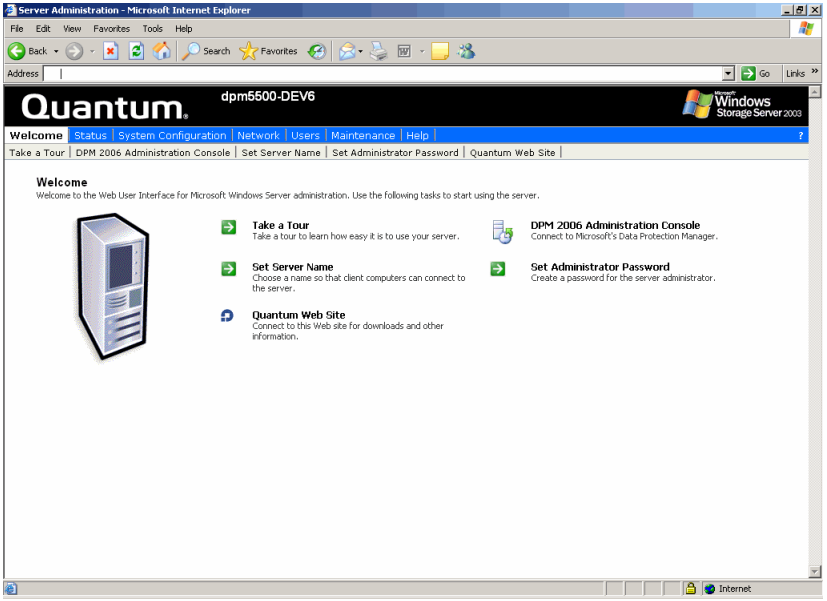
The **Log In** page displays.

3 Enter the Username and password.

> **Note:** The default user name is **administrator**. The default password is **Quantum-DPM.** The password is case-sensitive.

The **Welcome** screen displays (see figure 11).

Figure 11 Welcome Screen


Server Administration - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address
Go Links
Quantum
dpm5500-DEV6
Windows Storage Server 2003
Welcome Status System Configuration Network Users Maintenance Help
Take a Tour DPM 2006 Administration Console Set Server Name Set Administrator Password Quantum Web Site
Welcome
Welcome to the Web User Interface for Microsoft Windows Server administration. Use the following tasks to start using the server.
Take a Tour
Take a tour to learn how easy it is to use your server.
DPM 2006 Administration Console
Connect to Microsoft's Data Protection Manager.
Set Server Name
Choose a name so that client computers can connect to the server.
Set Administrator Password
Create a password for the server administrator.
Quantum Web Site
Connect to this Web site for downloads and other information.
Internet

The **Welcome** screen displays the following options (see table 6):

Table 6 Welcome Screen Options

Welcome Screen Option	Description
Take a tour	Select this option to take a quick tour of Windows Storage Server 2003.
Set server name	Select this option to set the server name. This server name is used for client computer access.
Quantum web site	Select this option to access the Quantum web site for downloads and other information.
DPM 2006 Administration Console	Select this option to connect to the Microsoft Data Protection Manager. Refer to the Microsoft DPM documentation for more information.
Set administrator password	Select this option to set the administrator password.

System Status

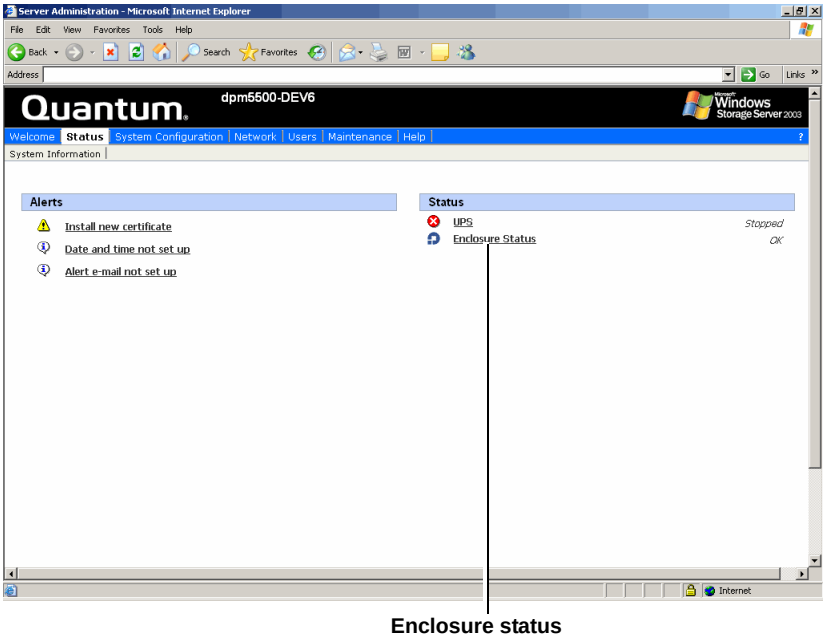
The **System Status** page allows you to view information and monitor the DPM5500 system hardware.

Accessing System Status

To access the **System Status** page, from the DPM5500 web pages, click **System Status** located at the top of the screen.

The **System Status** page displays (see figure 12).

Figure 12 System Status Page

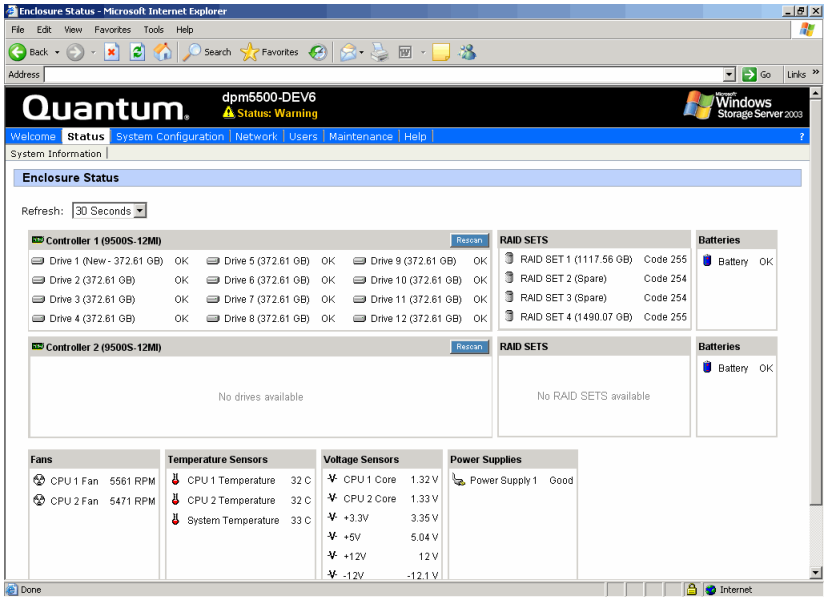


The **System Status** page provides access to the **Enclosure Status** page.

1 To view the hardware status, click **Enclosure Status**.

The **Enclosure Status** page displays (see figure 13).

Figure 13 Enclosure Status



Refer to the following table for the enclosure status details (see table 7).

Table 7 Enclosure Status Details

Enclosure Status Details	Description
Controller 1 and 2	Controller 1 and controller 2 refer to the RAID controllers connected to the hard drives. Controller 1 controls the first twelve hard drives. Controller 2 controls the last twelve hard drives (if installed).
RAID Sets	The RAID sets display the current RAID configuration on the specific RAID controller (see table 8).
Batteries	Each controller has a battery backup unit attached. This section displays the battery status and health.
Fans	This section monitors the status of the two CPU cooling fans.

Enclosure Status Details	Description
Temperature Sensors	This section displays the temperature of each CPU as well as the overall system temperature.
Voltage Sensors	This section displays the CPU and system voltages.
Power Supplies	The DPM5500 has four power supplies installed in the chassis. This section displays the overall status of the power supply. If a power supply failure is detected, refer to the power supply LEDs located on the back of the DPM5500 chassis to identify the failed power supply (see figure 8 on page 13).

Table 8 RAID Set Configurations

	Array Controller 1		
	1st RAID Set		2nd RAID Set
DPM5500 (Drives 0 through 11)	Drives 0 through 4	Drive 5 hot spare	Drives 6 through 11
	Array Controller 2		
	3rd RAID Set		4th RAID Set
DPM5500 (Drives 0 through 11)	Drives 0 through 4	Drive 5 hot spare	Drives 6 through 11

System Configuration

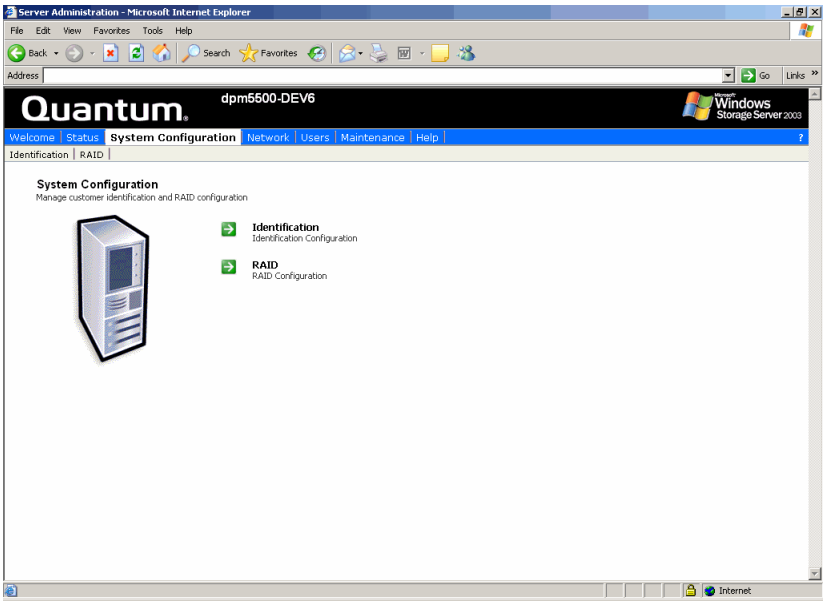
The **System Configuration** page allows you to change the system identity and RAID configuration.

Accessing System Configuration

To access the **System Configuration** page, from the DPM5500 web pages, click **System Configuration** located at the top of the screen.

The **System Configuration** screen displays (see figure 14).

Figure 14 System Configuration Page



The **System Configuration** page is divided into two sections:

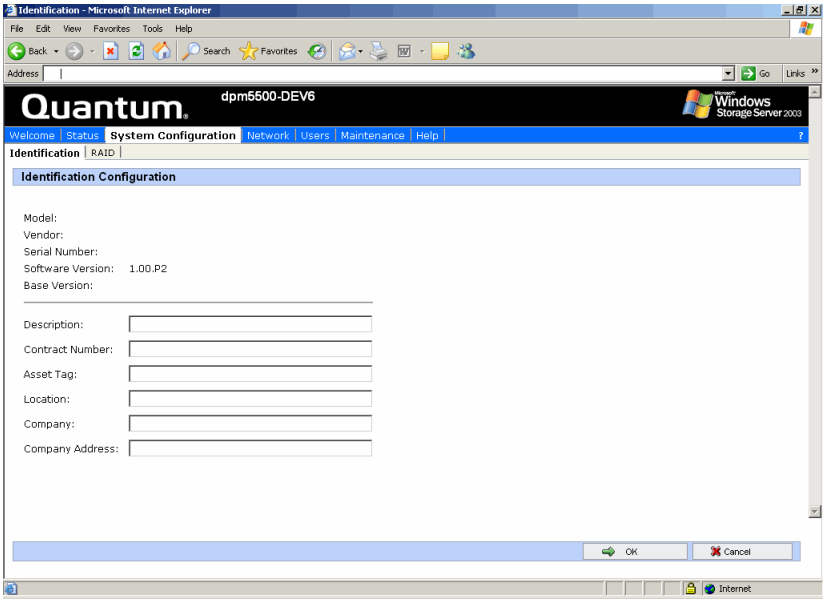
- Identification
- RAID

Identification

To access the **Identification** screen, from the **System Configuration** page, click the **Identification** link.

The **Identification** screen displays (see figure 15).

Figure 15 Identification Page



Edit the identification information as desired and click **OK** (see table 9 for a description of the fields).

Table 9 Identification Information Fields

Field	Description
Description	Enter a short description of the DPM5500. This information will help identify this specific system.
Contract Number	Enter the contract number for the DPM5500. This is used to identify the system to customer support.
Asset Tag	Enter the asset tag if available. This is generally an internal customer tracking number.
Location	Enter the location of the DPM5500. This helps to identify the DPM5500 when remotely controlling multiple systems.

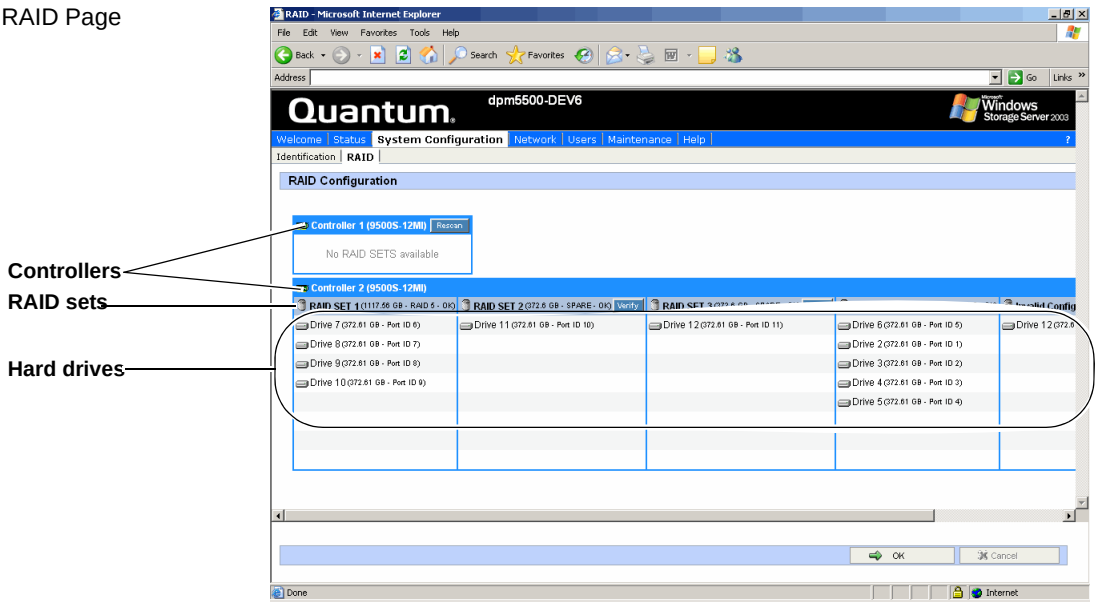
Field	Description
Company	Enter the company name where the DPM5500 is located
Company Address	Enter the company address where the DPM5500 is located

RAID

To access the **RAID** screen, from the **System Configuration** page, click the **RAID** link.

The **RAID** screen displays (see figure 16).

Figure 16 RAID Page



The **RAID** page displays status RAID controller and hard drive information (see table 10 for a description of the fields).

Table 10 RAID Status Information

Field	Description
RAID Controllers	There are two RAID controllers in the DPM5500. Up to twelve hard drives can be assigned to each RAID controller.
RAID Sets	Each controller can have two possible RAID sets (see table 8 on page 23).
Hard Drives	The DPM5500 can have up to twenty four hard drives installed.
Hot Spares	The DPM5500 can have up to two "hot-spare" hard drives in the system (one hot spare per RAID controller).

When finished viewing the **RAID** screen, click **OK**.

Network Configuration

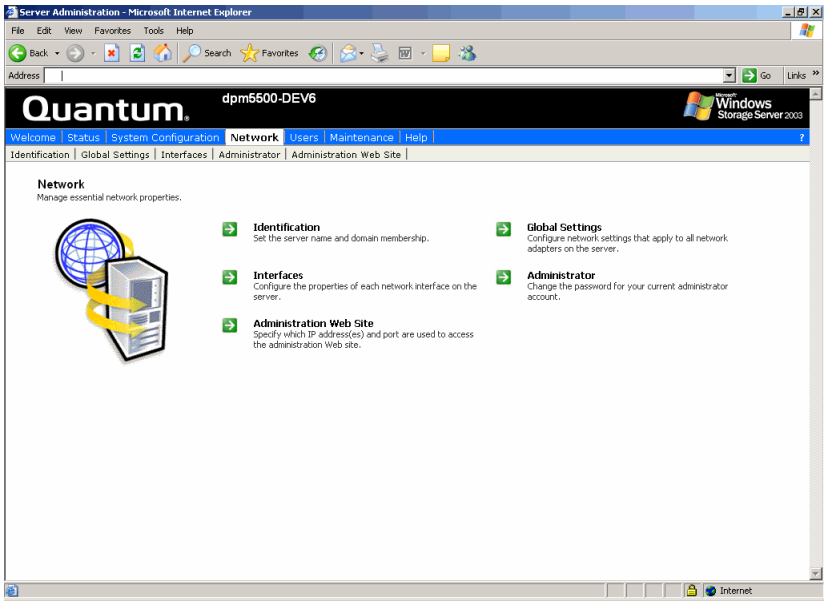
The **Network Configuration** page allows you to view and edit the system network configuration information.

Accessing Network Configuration

To access the **Network Configuration** page, from the DPM5500 web pages, click **Network Configuration** located at the top of the screen.

The **Network Configuration** page displays (see figure 17).

Figure 17 Network Configuration Page


Server Administration - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address
Go Links
Quantum
dpm5500-DEV6
Windows Storage Server 2003
Welcome Status System Configuration Network Users Maintenance Help
Identification Global Settings Interfaces Administrator Administration Web Site
Network
Manage essential network properties.
Identification
Set the server name and domain membership.
Global Settings
Configure network settings that apply to all network adapters on the server.
Interfaces
Configure the properties of each network interface on the server.
Administrator
Change the password for your current administrator account.
Administration Web Site
Specify which IP address(es) and port are used to access the administration Web site.
Internet

The **Network Configuration** page is divided into five sections:

- Identification
- Global Settings
- Network Interfaces
- Administrator
- Administration Web Site

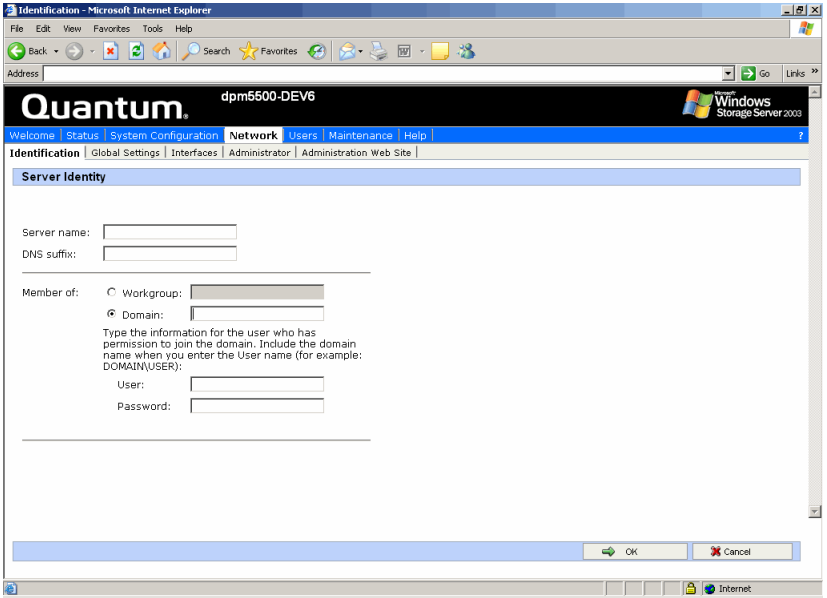
Identification

The DPM5500 must have identification information so client computers on the network can access the system.

To access the **Identification** screen, from the **Network Configuration** page, click the **Identification** link.

The **Identification** screen displays (see figure 18).

Figure 18 Network Identification Screen



Edit the network identification information as desired and click **OK** (see table 9 for a description of the fields).

Table 11 Network Identification Information Fields

Field	Description
Server Name	Enter a short description of the DPM5500. This information will help identify this specific system.
DNS Suffix	Enter the DNS suffix. This is optional.
Workgroup	The DPM5500 does not use the workgroup setting. You must use a domain.
Domain	Enter the domain name for the DPM5500 system. Include the domain name when you enter the user name (for example: DOMAIN\USER): Once this name is set during the initial system configuration, it can not be changed.
User	Enter the user name for access to the domain.
Password	Enter the password for access to the domain.

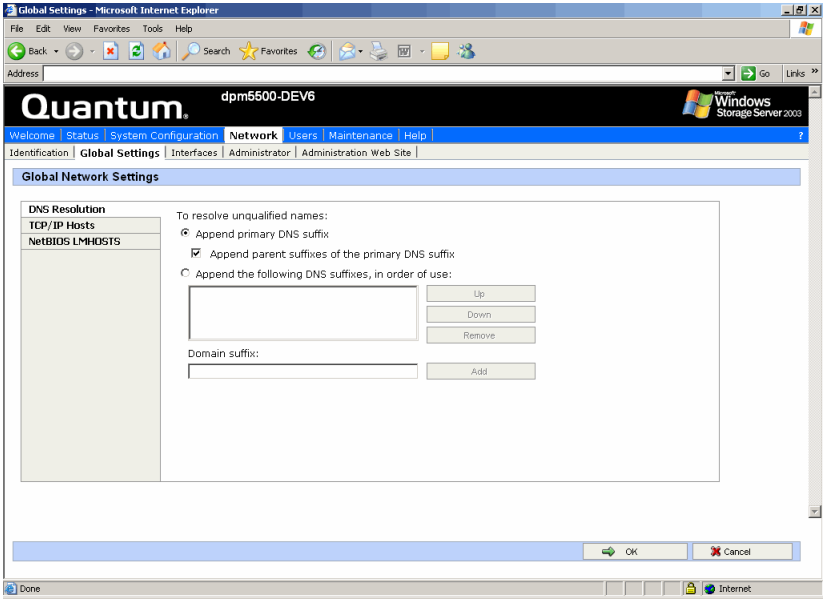
Global Settings

The **Global Settings** screen is used to change the overall network settings for the DPM5500 by configuring the IP settings as well as specifying the NDS suffixes and LMHOSTS and HOSTS files to use.

To access the **Global Settings** screen, from the **Network Configuration** page, click the **Global Settings** link.

The **Global Settings** screen displays (see figure 19).

Figure 19 Global Settings Screen



Edit the **Global Settings** screen as desired and click **OK** (see table 12 for a description of the fields).

Table 12 Global Settings Fields

Field	Description
DNS Resolution	Select **Append primary DNS suffix** to automatic DNS resolution or **Append the following DNS suffixes in order of use** for manual DNS resolution.

Field	Description
NetBIOS LMHOSTS	Select **Enable LMHOSTS lookup** and edit the LMHOSTS file by clicking in the box and editing the information.
TCP/IP Hosts	Edit the hosts file by clicking in the box and editing the information.

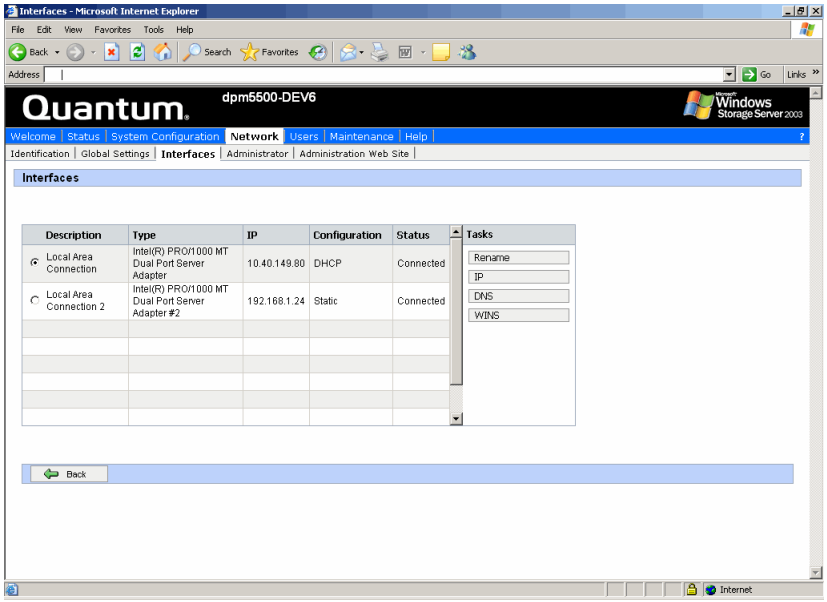
Network Interfaces

The Ethernet ports located on the back of the DPM5500 (see figure 7 on page 12) provide a physical interface with the local network.

To access the **Interfaces** screen, from the **Network Configuration** page, click the **Interfaces** link.

The **Network Interfaces** screen displays (see figure 20).

Figure 20 Network Interfaces Screen



The **Interfaces** screen displays the following information:

- Available Ethernet ports (**Local Area Connection** and **Local Area Connection 2**)

- Type of network adapters
- Current IP identification
- Status (**Connected** or **Not Connected**)

When finished viewing the **Network Interfaces** screen, click **OK**.

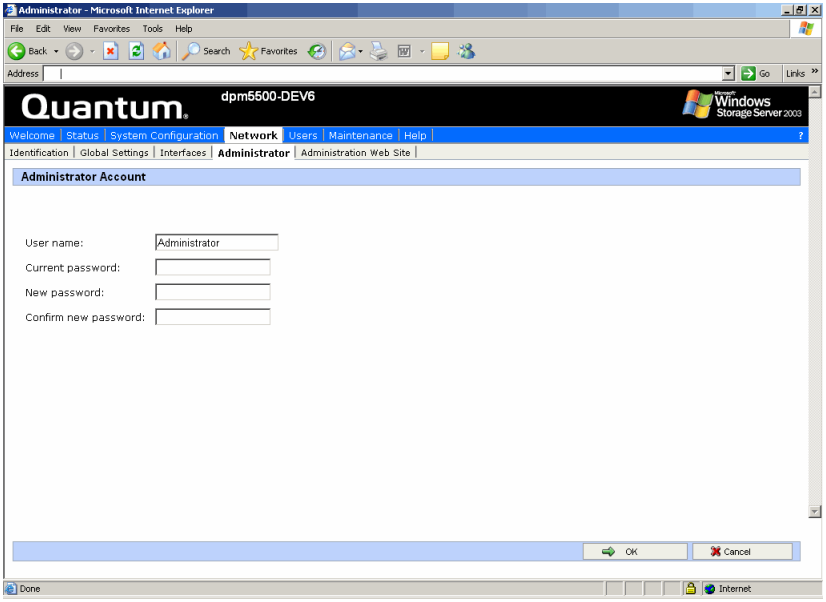
Administrator

The Administrator screen is used to edit the Administrator username and password. The administrator account has access to all areas of the DPM5500 remote user interface.

To access the **Administrator** screen, from the **Network Configuration** page, click the **Administrator** link.

The **Administrator** screen displays (see figure 21).

Figure 21 Administrator Screen



Edit the **Administrator** screen as desired and click **OK** (see table 12 for a description of the fields).

Table 13 Administrator Fields

Field	Description
Username	Enter the username for the administrator account.
Current Password	Enter the current password in order to change the password.
New Password	Enter the new password.
Confirm Password	Re-enter the new password to confirm.

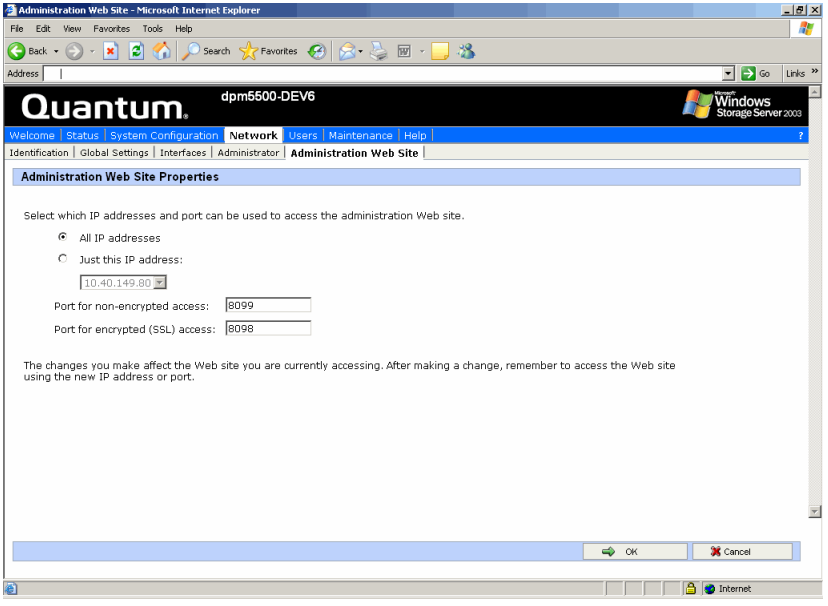
Administration Web Site

The **Administration Web Site** allows you to change the IP address(es) and ports used to access the DPM5500 remote user interface.

To access the **Administration Web Site** screen, from the **Network Configuration** page, click the **Administration Web Site** link.

The **Administration Web Site** screen displays (see figure 22).

Figure 22 Administration Web Site Screen


Administration Web Site - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address
Go Links
Quantum
dpm5500-DEV6
Windows Storage Server 2003
Welcome Status System Configuration Network Users Maintenance Help
Identification Global Settings Interfaces Administrator Administration Web Site
Administration Web Site Properties
Select which IP addresses and port can be used to access the administration Web site.
All IP addresses
Just this IP address:
10.40.149.80
Port for non-encrypted access: 8099
Port for encrypted (SSL) access: 8098
The changes you make affect the Web site you are currently accessing. After making a change, remember to access the Web site using the new IP address or port.
OK
Cancel
Internet

Edit the **Administrator Web Site** screen as desired and click **OK** (see table 14 for a description of the fields).

Table 14 Administration Web Site Fields

Field	Description
All IP Addresses	Select this field if all IP address can access the DPM5500 remote user interface.
Just this IP Address	Select this field if a specific IP address is used to access the DPM5500 remote user interface.
Port for Non-Encrypted Access	If you are using a port for non-encrypted access, enter the port number in this field. This field is disabled by default.
Port for encrypted (SSL) access	If you are using the port for encrypted access, enter the port number in this field.

Users

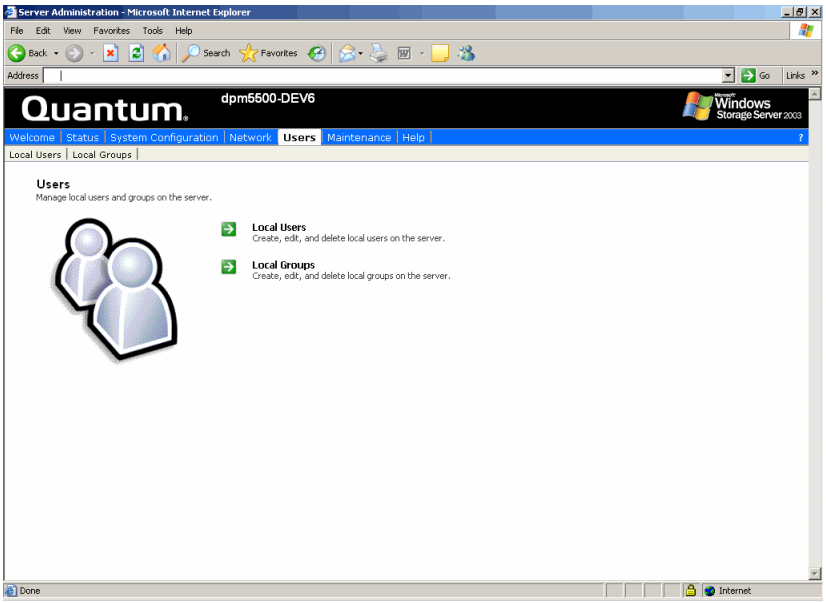
The **Users** page allows you to create, edit, or delete local users and local groups.

Accessing Users

To access the **Users** page, from the DPM5500 web pages, click **Users** located at the top of the screen.

The **Users** page displays (see figure 23).

Figure 23 Users Page



The **Users** page is divided into two sections:

- Local Users
- Local Groups

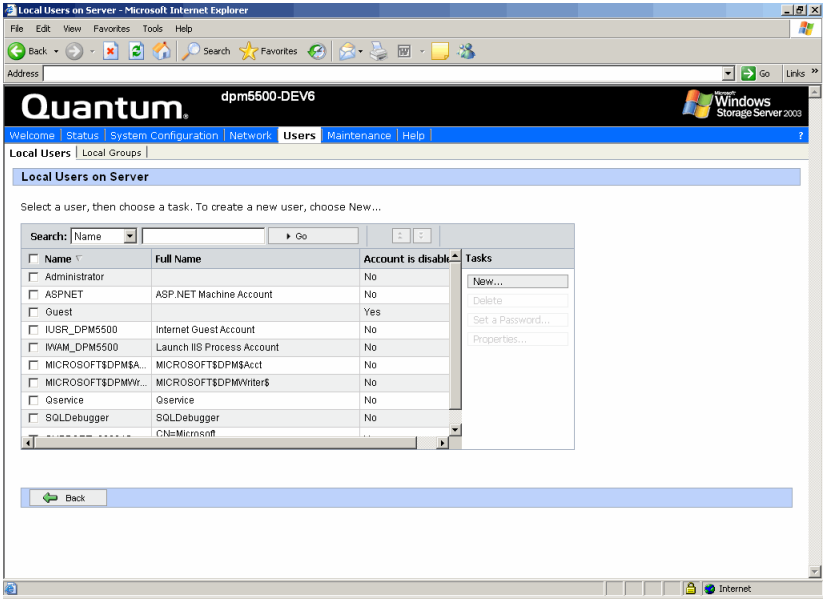
Local Users

A local user account is an account that exists on the DPM5500 and grants users or groups access to the system.

To access the **Local Users** screen, from the **Users** screen, click the **Local Users** link.

The **Local Users** screen displays (see figure 24).

Figure 24 Local Users



Edit the **Local Users** screen as desired and click **Back.** To add a new user, click **New** and enter the information for the new user account.

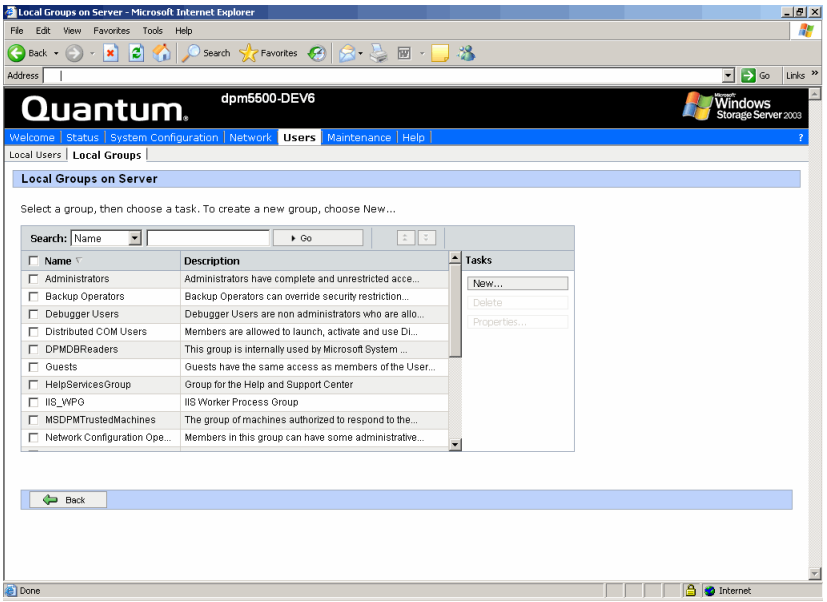
Local Groups

A local group account is an account that exists on the DPM5500 and grants access to DPM5500 resources.

To access the **Local Groups** screen, from the **Users** screen, click the **Local Groups** link.

The **Local Groups** screen displays (see figure 25).

Figure 25 Local Groups



Edit the **Local Groups** screen as desired and click **Back.** To add a new groups, click **New** and enter the information for the new group account.

Maintenance

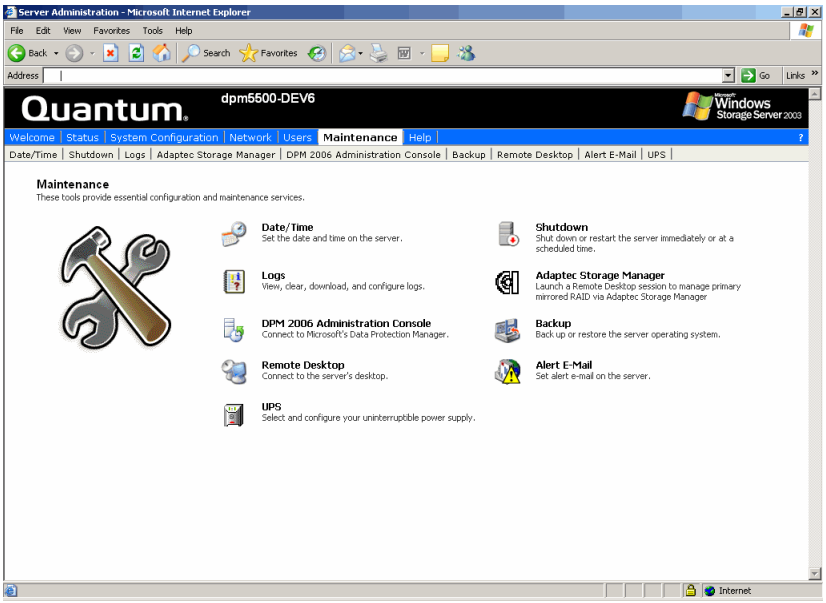
The **Maintenance** page allows you to perform general DPM5500 maintenance tasks.

Accessing Maintenance

To access the **Maintenance** page, from the DPM5500 web pages, click **Maintenance** located at the top of the screen.

The **Maintenance** page displays (see figure 26).

Figure 26 Maintenance Page


Server Administration - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address
Go Links
Quantum
dpm5500-DEV6
Windows Storage Server 2003
Welcome Status System Configuration Network Users Maintenance Help
Date/Time Shutdown Logs Adaptec Storage Manager DPM 2006 Administration Console Backup Remote Desktop Alert E-Mail UPS
Maintenance
These tools provide essential configuration and maintenance services.
Date/Time
Set the date and time on the server.
Shutdown
Shut down or restart the server immediately or at a scheduled time.
Logs
View, clear, download, and configure logs.
Adaptec Storage Manager
Launch a Remote Desktop session to manage primary mirrored RAID via Adaptec Storage Manager
DPM 2006 Administration Console
Connect to Microsoft's Data Protection Manager.
Backup
Back up or restore the server operating system.
Remote Desktop
Connect to the server's desktop.
Alert E-Mail
Set alert e-mail on the server.
UPS
Select and configure your uninterruptible power supply.
Internet

The **Maintenance** page is divided into the following sections:

- Date and Time
- Shutdown
- Logs
- Adaptec® Storage Manager
- DPM Administrator Console
- Backup
- Remote Desktop
- Alert E-Mail
- UPS

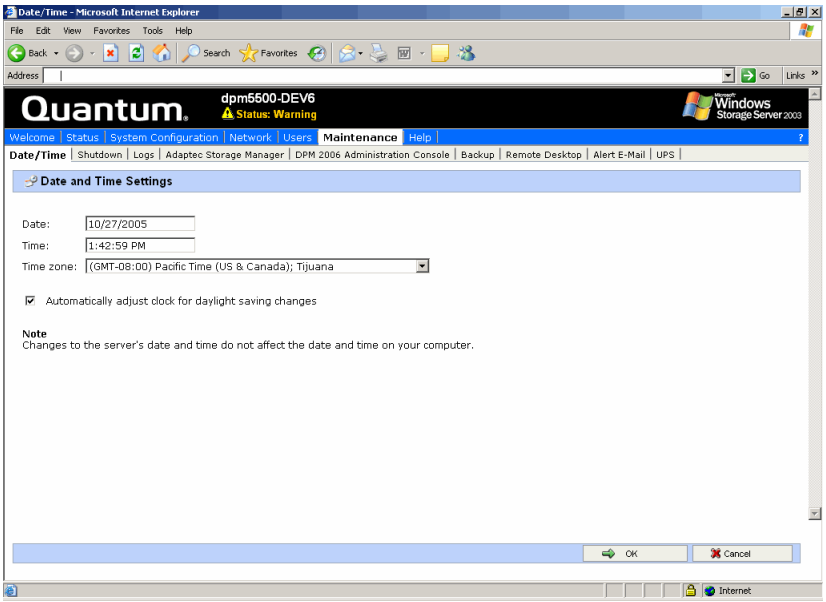
Date and Time

The **Date and Time** screen allows you to set the date, time, and time zone used by the DPM5500.

To access the **Date and Time** screen, from the **Maintenance** screen, click the **Date and Time** link.

The **Date and Time** screen displays (see figure 27).

Figure 27 Date and Time Screen


Date/Time - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address
Go Links
Quantum
dpm5500-DEV6
Status: Warning
Windows Storage Server 2003
Welcome | Status | System Configuration | Network | Users | Maintenance | Help
Date/Time | Shutdown | Logs | Adaptec Storage Manager | DPM 2006 Administration Console | Backup | Remote Desktop | Alert E-Mail | UPS
Date and Time Settings
Date: 10/27/2005
Time: 1:42:59 PM
Time zone: (GMT-08:00) Pacific Time (US & Canada); Tijuana
Automatically adjust clock for daylight saving changes
Note
Changes to the server's date and time do not affect the date and time on your computer.
OK
Cancel
Internet

Edit the date and time information as desired and click **OK** when finished.

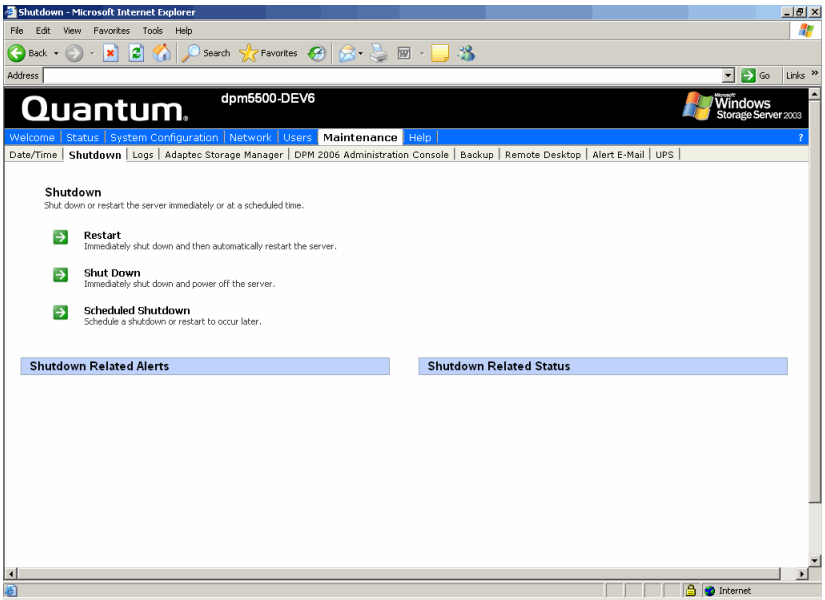
Shutdown

The **Shutdown** screen is used to shut down, restart, or schedule a shutdown or restart of the DPM5500.

To access the **Shutdown** screen, from the **Maintenance** screen, click the **Shutdown** link.

The **Shutdown** screen displays (see figure 28).

Figure 28 Shutdown Screen


Shutdown - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address
Go Links
Quantum
dpm5500-DEV6
Windows Storage Server 2003
Welcome Status System Configuration Network Users Maintenance Help
Date/Time Shutdown Logs Adaptec Storage Manager DPM 2006 Administration Console Backup Remote Desktop Alert E-Mail UPS
Shutdown
Shut down or restart the server immediately or at a scheduled time.
Restart
Immediately shut down and then automatically restart the server.
Shut Down
Immediately shut down and power off the server.
Scheduled Shutdown
Schedule a shutdown or restart to occur later.
Shutdown Related Alerts
Shutdown Related Status
Internet

Select the option you want to perform: **Shutdown**, **Restart**, or **Schedule Shutdown**.

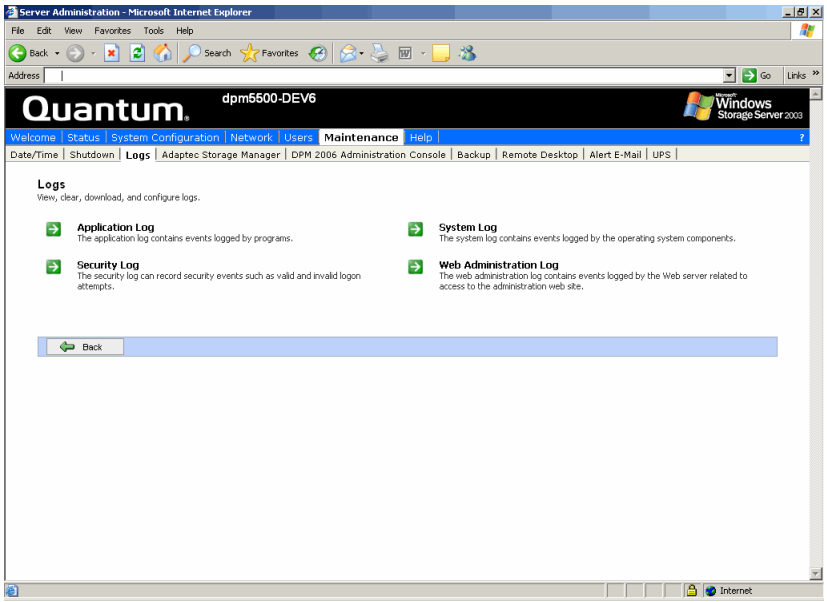
Logs

The **Logs** screen provides access to logs generated by DPM5500. These messages are used to track the operations performed on the system.

To access the **Logs** screen, from the **Maintenance** screen, click the **Logs** link.

The **Logs** screen displays (see figure 28).

Figure 29 Logs Screen


Server Administration - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address
Go Links
Quantum
dpm5500-DEV6
Windows Storage Server 2003
Welcome | Status | System Configuration | Network | Users | Maintenance | Help
Date/Time | Shutdown | Logs | Adaptec Storage Manager | DPM 2006 Administration Console | Backup | Remote Desktop | Alert E-Mail | UPS
Logs
View, clear, download, and configure logs.
Application Log
The application log contains events logged by programs.
System Log
The system log contains events logged by the operating system components.
Security Log
The security log can record security events such as valid and invalid logon attempts.
Web Administration Log
The web administration log contains events logged by the Web server related to access to the administration web site.
Back
Internet

Select the log you want to view:

- **Application Log** - The application log contains events logged by programs.
- **Security Log** - The security log can record security events such as valid and invalid logon attempts.
- **System Log** - The system log contains events logged by the operating system components.
- **Web Administration Log** - The web administration log contains events logged by the Web server related to access to the administration web site.

When finished viewing the **Logs** screen, click **Back**.

Adaptec® Storage Manager

The **Adaptec Storage Manager** screen provides access the Adaptec application used to manage the primary mirrored RAID hard disks via **Adaptec Storage Manager.**

To access the **Adaptec Storage Manager** screen, from the **Maintenance** screen, click the **Adaptec Storage Manager** link.

The **Adaptec Storage Manager** screen displays.

The **Adaptec Storage Manager** screen displays the health status of the two mirrored hard drives used to store the DPM5500 operating system and DPM software. If one of the drives fails, the **Adaptec Storage Manager** will indicate which drive has failed (drive 0 or drive 1).

DPM Administrator Console

The **DPM Administrator Console** screen provides access to Microsoft Data Protection Manager. For more information, refer to Microsoft's documentation.

To access the **DPM Administrator Console** screen, from the **Maintenance** screen, click the **Logs** link.

The **DPM Administrator Console** screen displays.

Backup

The **Backup** screen allows you to back up or restore the DPM5500 operating system. This allows you to backup the operating system files off of the DPM5500 onto another storage device such as a tape library.

To access the **Backup** screen, from the **Maintenance** screen, click the **Backup** link.

The **Backup** screen displays.

1. Log onto the remote desktop connection.

   The backup begins automatically. When finished, click **Close**.

Remote Desktop

The **Remote Desktop** screen provides the ability for you to log onto and remotely administer your DPM5500 server software. This allows you to manage the DPM5500 software from a client. **Remote Desktop** allows only two concurrent sessions. Leaving a session running takes up one license and can affect other users. If two sessions are running, new users are denied access.

> **Note:** **Remote Desktop** is only supported on systems running Internet Explorer.

To access the **Remote Desktop** screen, from the **Maintenance** screen, click the **Remote Desktop** link.

The **Remote Desktop** screen displays.

1. Log onto the remote desktop connection.

The DPM5500 server desktop displays. When finished, click **Close**.

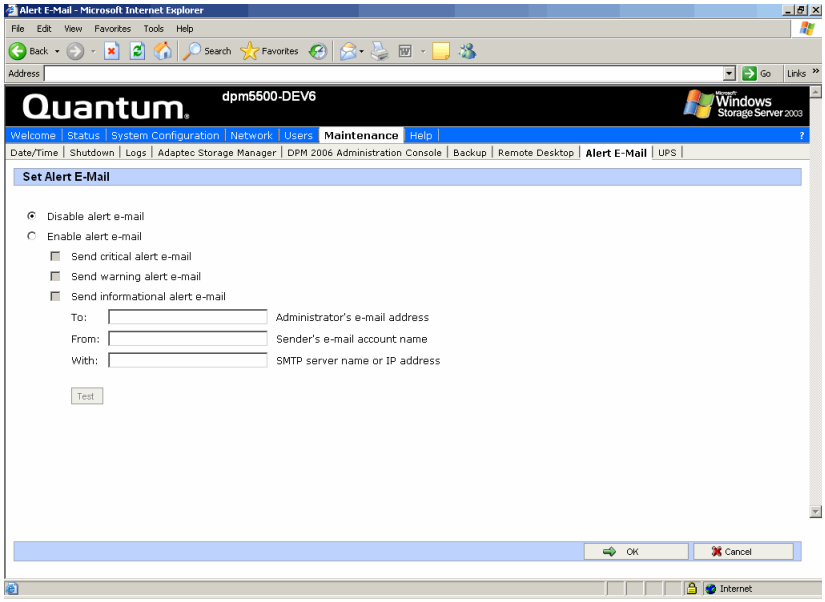
Alert E-Mail

The DPM5500 can be configured to generate an automatic email notification when an alert is raised. you can choose to be notified when any type of alert is raised or only for specific alert types, such as information, warning, or critical alerts.

To access the **Alert E-Mail** screen, from the **Maintenance** screen, click the **Alert E-Mail** link.

The **Alert E-Mail** screen displays (see figure 30).

Figure 30 Alert E-Mail Screen



Edit the **Alert E-Mail** screen as desired and click **OK** (see table 14 for a description of the fields).

Table 15 Alert E-Mail Fields

Field	Description
Disable alert email	Select this option to disable the alert email system.

Field	Description
Enable alert email	Select this option to enable the alert email system.
Send critical alert email	Select this item to send an email alert when a critical event has occurred on the DPM5500.
Send warning alert email	Select this item to send an email alert when a warning event has occurred on the DPM5500.
Send informational alert email	Select this item to send an email alert when a informational event has occurred on the DPM5500.
Email Information	Enter the email information for the network.
Test	Click test to send a test alert email to verify the system.

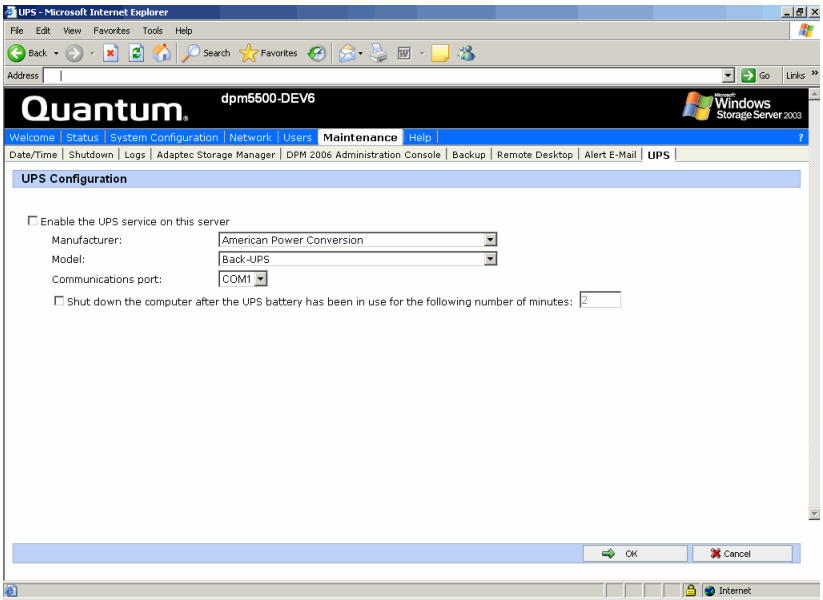
UPS

Uninterruptible Power Supply (UPS) provides emergency backup power for a specific period of time when the local power fails. This power comes from batteries housed within the UPS. Once you have installed a UPS for your DPM5500, you can set options for its operation.

To access the **UPS** screen, from the **Maintenance** screen, click the **UPS** link.

The **UPS** screen displays (see figure 31).

Figure 31 UPS Screen


UPS - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address
Go Links
Quantum
dpm5500-DEV6
Windows Storage Server 2003
Welcome Status System Configuration Network Users Maintenance Help
Date/Time Shutdown Logs Adaptec Storage Manager DPM 2006 Administration Console Backup Remote Desktop Alert E-Mail UPS
UPS Configuration
Enable the UPS service on this server
Manufacturer: American Power Conversion
Model: Back-UPS
Communications port: COM1
Shut down the computer after the UPS battery has been in use for the following number of minutes: 2
OK
Cancel
Internet

Edit the **UPS** screen as desired and click **OK** (see table 14 for a description of the fields).

Table 16 UPS Fields

Field	Description
Enable the UPS service on this server	Select this option to enable the UPS service on the DPM5500.
Manufacturer	Select manufacturer of the UPS used with the DPM5500.
Model	Select model of UPS used with the DPM5500.
Communications port	Select the communication port (COM1 or COM2) used on the DPM5500.
Shut down the computer...	Select the number of minutes before the DPM5500 is shutdown after the UPS has been in use.

Appendix A

DPM5500 System Specifications

This appendix lists characteristics and specifications the DPM5500. These characteristics and specifications are categorized as follows:

- Physical Characteristics
- Performance Characteristics
- Environmental Specifications

Note: For hard drive specifications see the appropriate hard drive product manual.

Physical Characteristics

Table 17 provides dimensions and other physical characteristics of the DPM5500 components.

Table 17 Physical Characteristics

DPM5500	
Chassis width	19 in (48.3 cm)
Chassis height	8.75 in (22.2 cm), 5U
Chassis depth	25.4 in (64.5 cm)
Chassis Weight	122 in (55.33 kg)

Table 18 Interfaces

Power Input	
Power cord	NEMA 5-15P to C13 connector (Qty 4)
Interface	
Hardware	10/100/1000-BaseT Ethernet

Performance Characteristics

Table 19 lists the reliability characteristics of the DPM5500 system.

Table 19 Reliability Characteristics

MTBF	Controller - 200,000 power-on hours Storage Array - 2,000,000 power-on hours 99.999% reliability
MTTR	Less than 30 minutes

Environmental Specifications

Table 20 provides various library environmental specifications.

Table 20 Environmental Specifications

Power Environment		
Electrical inputs	Voltage	110 VAC to 240 VAC (DPM5500)
	Rated Frequency	50 to 60 Hz
	Rated Current	5A @230 VAC x 4 (DPM5500)
	Consumption	700 Watts
Climatic Environment		
Temperature	Operating	50° F to 95° F (10° C to 35° C)
	Shipping and storage	-4° F to 140° F (-20° C to 60° C)

Relative humidity	Operating	20% to 80%, non-condensing
	Shipping and storage	15% to 95%, non-condensing
Altitude	Operating	0 to 10,000 ft. (0 to 3,048 m)
	Shipping and storage	0 to 39,370 ft. (0 to 12,000 m)
Heat	Operating	3,590 Btu/hour

Acoustical Noise

Sound power level	Operating	8.10 Bel
	Idle	7.83 Bel
Sound pressure @ bystander	Operating	63db